ATTACHMENT A

Claims 1 - 24: (Cancelled)

25. (New): A liquid-phase process for polymerizing at least one α-olefin of formula CH_2=CHR, wherein R is H or a C_1-C_6 alkyl radical, comprising the steps of:

- continuously polymerizing in a liquid reaction medium the α-olefin with a catalyst system comprising at least one transition metal compound;
- continuously withdrawing a solution of liquid reaction medium soluble polymer;
- mixing in one or more mixing stages the solution of liquid reaction medium soluble polymer with an organic deactivator having at least one hydroxy group, and a boiling point higher than 150°C, wherein a ratio of the molecular weight (MW) of the organic deactivator to the hydroxy group (n_{OH}) of the organic deactivator is between 20 and 100.

26. (New): The process according to claim 25, wherein the α-olefin is butene-1.

27. (New): The process according to claim 26, wherein a solution of polybutene-1 is in the liquid reaction medium and is continuously obtained.

28. (New): The process according to claim 27, wherein the liquid reaction medium is liquid butene-1.

29. (New): The process according to claim 25, wherein the

α-olefin is continuously polymerizing in the liquid reaction medium at a temperature from 65 to 85°C.

30. (New): The process according to claim 25, wherein the α-olefin is continuously polymerizing in the liquid reaction medium at a pressure between 8 and 40 bar.

31. (New): The process according to claim 25, wherein the α-olefin is continuously polymerizing in the liquid reaction medium in at least one continuously stirred tank reactor.

32. (New): The process according to claim 28, wherein a concentration of polybutene-1 in butene-1 is kept to a value of less than 35% by weight in the liquid reaction medium.

33. (New): The process according to claim 32, wherein the concentration of polybutene-1 in butene-1 is between 10 and 30% by weight in the liquid reaction medium.

34. (New): The process according to claim 25, wherein butene-1 is polymerized with up to 20% by weight based on butene-1, of an α-olefin other than butene-1.

35. (New): The process according to claim 25, wherein the ratio of the molecular weight (MW) of the organic deactivator to the hydroxy group (n_{OH}) of the organic deactivator is between 30 and 70.

36. (New): The process according to claim 25, wherein the

organic deactivator is selected from propylene glycol, dipropylene glycol, glycerol, diethylene glycol, and butandiol.

37. (New): The process according to claim 25, wherein the catalyst system is a Ziegler-Natta catalyst comprising a Ti-containing compound as a solid catalyst component and an Aluminum alkyl compound as an activator.

38. (New): The process according to claim 37, wherein a molar ratio of the organic deactivator/(Ti+Al) is higher than $2/n_{OH}$.

39. (New): The process according to claim 38, wherein the molar ratio is between $3/n_{OH}$ and $6/n_{OH}$.

40. (New): The process according to claim 25, wherein mixing in one or more mixing stages the solution of liquid reaction medium soluble polymer with the organic deactivator is carried out in one or more mixing tanks placed in series.

41. (New): The process according to claim 25, wherein mixing in one or more mixing stages the solution of liquid reaction medium soluble polymer with the organic deactivator is carried out in a single deactivation apparatus further comprising a sequence of mixing stages.

42. (New): The process according to claim 41, wherein the single deactivation apparatus further comprises a stirring shaft comprising between 2 and 20 impellers.

43. (New): The process according to claim 42, wherein the mixing stages are formed along the stirring shaft by rotating the impellers.

44. (New): The process according to claim 42, wherein the impellers comprise radial blades fixed at the stirring shaft, the radial blades causing a radial flow inside each mixing stage.

45. (New): The process according to claim 41, wherein the solution of liquid reaction medium soluble polymer and the organic deactivator are continuously fed at an inlet of the deactivation apparatus and flow slowly through the sequence of mixing stages.

46. (New): The process according to claim 28, further comprising passing a solution of polybutene-1 in butene-1 to a separation step, wherein the polybutene-1 is separated from unreacted monomer, which is recovered and re-circulated.

47. (New): The process according to claim 46, wherein the separation step is carried out by melt devolatilization by means of one or more volatilization chambers operating at a decreasing pressure.

48. (New): The process according to claim 34, wherein butene-1 is polymerized with 0.5 to 10% by weight based on butene-1, of an α-olefin other than butene-1.